



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,409	11/06/2000	Zhigang Fan	XER 2 0348; D/99426	9961

7590 08/19/2004

Albert P Sharpe III Esq
Fay Sharpe Fagan
Minnich & McKee LLP
1100 Superior Avenue 7th Floor
Cleveland, OH 44114-2518

EXAMINER

JONES, DAVID

ART UNIT PAPER NUMBER

2622

DATE MAILED: 08/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/707,409

Applicant(s)

FAN, ZHIGANG

Examiner

David L Jones

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/6/2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 11/06/2000 was filed before the mailing date of the first action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 2, #119. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted

Art Unit: 2622

on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5, 8-10, 12, 15, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al. (US 6,766,056).

Regarding claim 1, Huang et al. (Huang) discloses (fig. 19, column 21, lines 53-67) a system for rendering an electronic image representation associated with a software application program, the system comprising:

a host processor (205, column 22, lines 18-35) programmed to execute the software application program;

a temporary storage device (206, column 22, lines 36-57) associated with the host processor;

a printer (215) interfaced to the host processor; and

software means (column 22, lines 36-57) operative on the host processor for determining whether the electronic image representation is of a predetermined document type by examining a least a portion of the electronic image representation when stored in the temporary storage device during the course of printing the electronic image representation at the printer. As disclosed by Huang (column 1, lines 29-50), the system provides for a method of detecting a predetermined mark forming part of an image.

Further, the system and method as disclosed by Huang et al. explicitly details performing all of the steps in both a printer and in a software configuration within a host computer.

Regarding claim 2, Huang et al. (Huang) discloses (fig. 19, column 21, lines 53-

Art Unit: 2622

67) a system for rendering an electronic image representation associated with a software application program, wherein the host processor is a personal computer (201).

Regarding claim 3, Huang et al. (Huang) discloses (fig. 19, column 21, lines 53-67) a system for rendering an electronic image representation associated with a software application program, wherein the temporary storage device is a plurality of memory addresses allocated in a random access memory of the host processor. As shown in figure 19, 206 is a RAM memory as detailed in column 22, lines 18-35, it well known that all memory contains a plurality of individual memory locations within the memory.

Regarding claim 5, Huang et al. (Huang) discloses (fig. 19, column 21, lines 53-67) a system for rendering an electronic image representation associated with a software application program, wherein the predetermined document type is a counterfeit document type (column 5, lines 24-41).

Regarding claim 8, Huang et al. discloses a system for detecting an image representation of a predetermined document type, the system comprising:

a host processor (205, column 22, lines 18-35);

a temporary storage device (206, column 22, lines 36-57) associated with the host processor;

a printer (215) interfaced to the host processor; and

software means (column 22, lines 36-57) operative on the host processor for:

a) buffering print data (column 5, lines 42-64) associated with a first portion of the image representation in the temporary storage device;

b) examining the buffered print data (column 5, lines 42-64) for a preselected feature of the predetermined document type;

Art Unit: 2622

c) rendering at least a portion (column 12, lines 50-55) of the buffered print data on the printer when the preselected feature is not found in the buffered print data; and

d) not rendering the buffered (column 12, lines 50-55) print data when the preselected feature is found in the buffered print data.

Regarding claim 9, the claim is analogous to claim 2.

Regarding claim 10, the claim is analogous to claim 3.

Regarding claim 12, the claim is analogous to claim 5.

Regarding claim 15, Huang discloses a method for detecting a preselected feature of an electronic image representation in a system including a host processor, a temporary storage device associated with the host processor, and a printer interfaced to the host processor, the method comprising:

a) buffering a first segment (column 5, lines 42-64) of the electronic image representation in the temporary storage device;

b) examining the first segment (column 5, lines 42-64) of the electronic image representation for the preselected feature;

c) rendering at least a portion (column 12, lines 50-55) of the first segment on the printer when the preselected feature is not found in the first segment; and

d) not rendering the first segment (column 12, lines 50-55) when the preselected feature is found in the first segment.

Regarding claim 20, Huang discloses that steps a) through d) are being completed, but Huang does not explicitly detail that the step is repeated until the entire document is completed, although it is inherent that the steps would have been completed until the document is completed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 11, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (US 6,766,056).

Regarding claims 4 and 11, Huang et al. (Huang) teaches (fig. 19, column 21, lines 53-67) a system for rendering an electronic image representation associated with a software application program, as taught by Huang that the software program is contained within the computer. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the software means is part of a printer driver software program.

Regarding claim 17, Huang teaches in figure 2, that prior to examining the print data for the preselected feature, image processing is being done on each pixel as it is being sent through the pixel buffer pipe. Further, as taught by Huang that a current scanline of pixel data is being processed, which it would have been obvious to one of ordinary skill in the art at the time the invention was made that he is processing a segment at a time.

Regarding claim 18, Huang teaches in figure 6, that prior to examining the print

Art Unit: 2622

data for the preselected feature and before it is rendered, image processing is being done on each pixel as it is being sent through the pixel buffer pipe and sub-sampling control. Further, as taught (column 9, lines 56-67) by Huang that preprocessing is being processed on both lines 54B and 54A, 54A is at 1 bit/pixel and 54B is at the 3 bits/pixel level. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that he is processing a portion of the segment at a time.

Regarding claim 19, Huang teaches in figure 6, that prior to examining the print data for the preselected feature and before it is rendered, image processing is being done on each pixel as it is being sent through the pixel buffer pipe and sub-sampling control. Further, as taught (column 9, lines 56-67) by Huang that preprocessing is being processed on both lines 54B and 54A, 54A is at 1 bit/pixel and 54B is at the 3 bits/pixel level. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that he is processing both a portion of the segment at a time as well as a segment at a time.

6. Claims 6-7, 13-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. as applied to claims 1-5, 8-12, 15, and 17-20 above, and further in view of Bender et al. (US 6,411,392).

Regarding claims 6 and 13, Huang et al. teaches (column 3, lines 61-67) that the printing system is done on a pixel-by-pixel. It is well known to store and print on a band-by-band method as taught by Bender et al. (column 2, lines 36-56).

Art Unit: 2622

Huang and Bender are analogous art because they both are from the same field of endeavor, image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the ability to store and print on a band-by-band basis of Bender with the system of Huang.

The suggestion/motivation for doing so would have been to provide a method where an inexpensive printer can be programmed to determine if a specific mark has been encoded.

Therefore, it would have been obvious to combine Bender with Huang to obtain the invention as specified in claims 6 and 13.

Regarding claims 7 and 14, Huang teaches that the system can be incorporated with color printers or combination devices having both a scanner and a printer in one device. However, Huang does not explicitly teach using an inkjet printer. Whereas, Bender teaches that the system as taught by Bender is specifically utilized on an inkjet printer (column 2, lines 36-56).

Regarding claim 16, Huang teaches buffering the data pixel-by-pixel, although he shows in figure 5, one scanline of image data temporary stored in the pixel buffer pipe. Whereas, Bender teaches that the contents of the buffered data define a "raster" (a regular two-dimensional pattern of discrete pixel positions). Which is the same as what is used for a particular band for printing depending on the printer.

Art Unit: 2622

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kakiuchi et al. (US 6,687,017) discloses a computer has a function of controlling operation of an image recognition unit for counterfeiting prevention in a printer.

Yang (US 6,731,784) discloses detection and deterrence of counterfeiting in a color copier.

Davis et al. (US 6,549,638) discloses a computer that is provided with software that looks for certain illicit activities (e.g. printing a banknote).

Art Unit: 2622

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L Jones whose telephone number is (703) 305-4675. The examiner can normally be reached on Monday - Friday (7:00am - 3:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David L. Jones



EDWARD COLES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600